

January 17, 1905

## ALVERSON REPORT ON CAJON WATER SYSTEM

It was received yesterday by Special Water Committee and last night by the City Council and by both approved

Reports that a Plant to deliver eight million gallons a day To University Heights Reservoir could be put in for \$245,270 - Option and other propositions.

Yesterday afternoon the Special Water Committee of the City Council met for the purpose of listening to the report of Engineer Alverson on the plans for the cost of a pipe line system to bring the water from El Cajon underground reservoir to the city of San Diego.

The report is full of figures of supply and cost and was accompanied by a map showing the area of water supply in the valley as far as the Engineer had completed the information, ~~when~~ <sup>one</sup> showing the route of the pipe line to the reservoir and two profiles showing the grade of the pipe line.

## THE REPORT

The report was read in full as follows:

Gentlemen:-

In compliance with the provisions of Ordinance No. 1815 calling for the further investigation of the water development in El Cajon Valley, also the locating of a conduit line to connect with the present water distributing system of the city of San Diego and the location of the proposed head works, <sup>San</sup> ~~after~~ submitting for your consideration the following:

The conduit line as located contemplates the delivery of the total water developed in El Cajon Valley into the University Heights Reservoir by gravity. This can be accomplished by raising the water at the proposed head works into a reservoir located at a sufficient elevation above sea level from which the water will <sup>flow</sup> ~~flow~~ by gravity to University Heights Reservoir. The distribution of the water in the city from the high reservoir to the lower service can be readily adjusted thru the pipe already in use

and those to be laid during the present year by the laying of about 700 feet additional of 16 inch diameter pipe from Old Town Reservoir along Twiggs Street to the present sixteen inch diameter main.

This, in my judgment is the most economical and feasible plan under existing circumstances that you can adopt for several reasons.

First. If the water at the proposed head works was raised to an elevation of say 330 feet above city datum and flow thru a passage by gravity to a point below and opposite the University Heights Reservoir, then at this point a second pumping plant would have to be installed to raise the required amount of water into the University Heights Reservoir; it would be about 3/4, at least, of the total consumption in the city. Also about 4 miles of additional pipe line would have to be laid to the Old Town reservoir to deliver the remaining 1/4 of the water. Also the lower conduit line to a point opposite the University Heights Reservoir, and thence to ~~thence~~ a reserve would be longer than the one recorded.

Second: The city is the owner of the water bearing lands in Mission Valley that will furnish a considerable quantity of water to the low service and at a reasonable cost. This can be done by concentrating the development at one point and convey the water so developed by gravity to ~~replace~~ the present main pumping plant and raise it at a low cost into the Old Town Reservoir. By adopting this method you retain the present main pumping plant to be used in case of emergency or unavoidable accident to the upper system.

## PROPOSED CONDUIT LINE

The proposed conduit line beginning at the University Heights reservoir; to extend along El Cajon Avenue, 2708 feet to the east line of the Pueblo of San Diego; thence along El Cajon Ave thru the Teralta Subdivision to the east line thereof; an additional ~~distance~~ distance of 2,682 feet or a total distance of 15,000 feet, horizontal measurement; thence northerly and easterly over and across the meads and ravines of the ex-Mission lands of San Diego.

At ~~the~~ 47285 feet the line reaches ex-Mission lands and crosses the west boundary line of El Cajon Rancho and distant about 300 feet southerly from the left bank of the San Diego River.

From the west boundary line of the El Cajon Rancho the line runs in a southerly and easterly direction 970 feet to reach the proposed distribution reservoir at the head of the gravity line, a total distance of 48,255 feet, or about  $9\frac{1}{2}$  miles, horizontal measurement.

The distributing reservoir is located in a depression formed by a shallow rocky ravine. The dam built across the ravine will form a storage reservoir of about 11 million (11,000,000) gallons capacity, which can be enlarged at some future time.

From this reservoir the line runs in an easterly direction over <sup>the</sup> hills, and the line intersects the main county wagon road along which it runs until a point directly south of the old McKoon Ranch house is reached; thence northerly across the Fanita Ranch to a point near the left highway bank of the San Diego river, a total of about 14,400 feet, or about  $2\frac{3}{4}$  miles.

At this point it is proposed to install the main pumping plant, and develop the water from the sands and gravels of the river bed and channel. A line, 9,487 feet in length was run from the proposed head works to Santee Station on the San Diego, Cuyamaca and Eastern Railway for a pipe to carry crude oil or distillate for fuel to be used at the pumping station.

The accompanying maps and profiles ~~of~~ show location and elevations along the lines per city datum.

WATER WORKS

The proposed improvements and system of water works are as follows:

First: On the  $E\frac{1}{2}$  of Block 122, University Heights Addition to build a ~~storage~~ storage reservoir of about 3,000,000 gallons capacity. The east of the

present reservoir which is located on the  $W\frac{1}{2}$  of the said Block 122 to form a wall of the proposed reservoir.

Second: the laying of a thirty inch diameter mild steel pipe equipped with the necessary air valves, blow-offs and gates from the above referred to University Heights reservoir to the proposed new Mission dam and reservoir

**Ed Fletcher Papers**

**1870-1955**

**MSS.81**

**Box: 35 Folder: 27**

**Business Records - Reports -  
Alverson, C.S - Cajon Water System**



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